

221
144

222-48

421 1911

A.D. 1911, OCT. 14. N^o. 22,701.
RUNKEL & another's COMPLETE SPECIFICATION.

(1 SHEET)

[This Drawing is a reproduction of the Original on a reduced scale.]

B. MILLS.
Grinding Mills
Feed Regulators.

222
48

B. Mills Feed Regulator

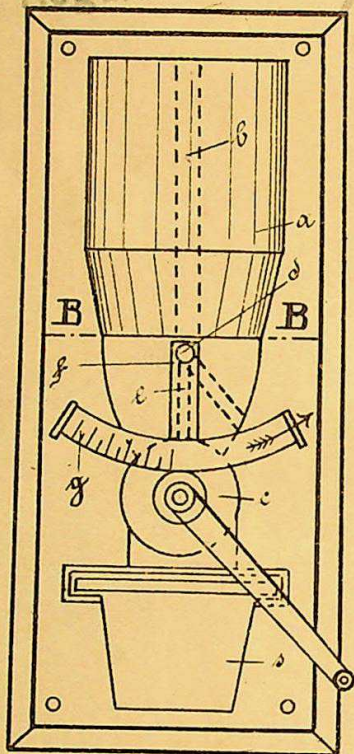


Fig. 1.

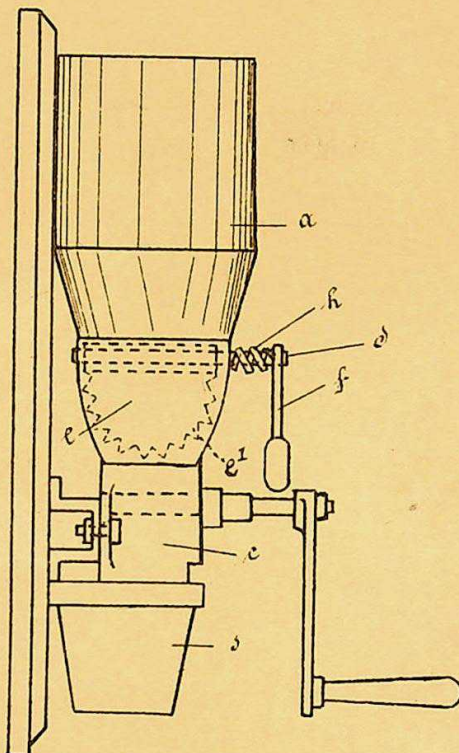


Fig. 2.

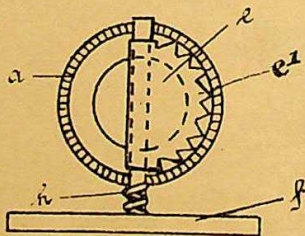


Fig. 3.

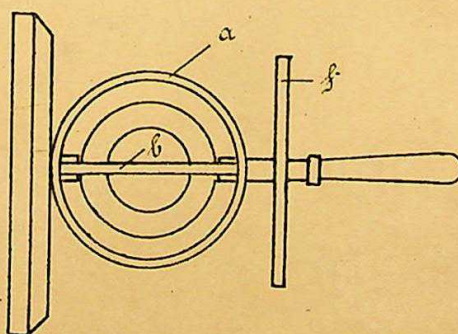
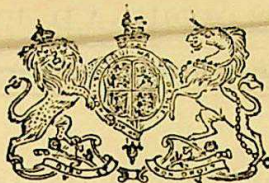


Fig. 4.

N^o 22,701



A.D. 1911

Date of Application, 14th Oct., 1911

Complete Specification Left, 13th Apr., 1912—Accepted, 11th July, 1912

PROVISIONAL SPECIFICATION.

Improvements in Feeding Devices for Mixing and Grinding Mills.

We, PETER RUNKEL, Merchant, and FRITZ SCHULTE, Foreman, both of Neuwied on Rhine, Germany, do hereby declare the nature of this invention to be as follows:—

This invention relates to improvements in mixing and grinding mills of the class wherein the chamber receiving the materials is divided into two reservoirs for the reception of one or more materials which it is desired to mix and grind.

In apparatus heretofore constructed it has been customary to provide the said chamber with a partition extending within a short distance of the bottom of such chamber, having an externally operated flap or shutter pivotted to and forming an extension of such partition. This flap when revolved about its pivot closes or partially closes the reservoir desired, so that the supply of material from either reservoir to the receiver is regulated as required. Such apparatus has not proved quite satisfactory by reason of the material forcing its way between the end of the flap or shutter and the inner wall of the chamber, thereby rendering proper adjustment of the flap difficult, and consequently preventing the correct regulating of the supply of the material or materials which are being treated.

The present invention has for its object to obviate these difficulties by so constructing the apparatus as to render jamming of the flap or shutter by the resistance of the material, practically impossible at the same time facilitating the action of such flap.

In the apparatus constructed according to the present invention the flap or shutter which is pivotted to the lower end of the dividing partition of the mixing chamber is at its outer periphery provided with a series of serrations which when the flap is operated or adjusted come into contact with the material causing any lumps or small pieces of the material which are near the edge of the flap to be broken up so as to allow them to pass through the spaces formed by the serrations, which will render the flap or shutter more easily operable owing to the material offering less resistance to the movement of the flap at its outer edge.

In another form of the flap the outer edge or edges may be sharpened to form a cutting edge, or if desirable the serrations above referred to may each constitute a cutting edge and be formed like the blade of a saw.

In order to fix the flap or shutter in any desired position in the chamber I provide the shaft or pivot on which the flap is mounted, the ends of said pivot passing the opposite sides of the chamber with a spring or springs pressing against the outer side or sides of the chamber and a bush, handle or the like formed on the end of the pivot.

It will thus be seen that the supply of material to the receiver from either chamber or reservoir may be regulated or the supply of either chamber may be entirely cut off.

A suitable scale or graduated plate for indicating the position of the flap or shutter may be employed if necessary as will be well understood.

Dated this 14th day of October, 1911.

S. SOKAL,
14 & 15, Southampton Buildings, London, W.C.,
Chartered Patent Agent.

[Price 8d.]

Improvements in Feeding Devices for Mixing and Grinding Mills.

COMPLETE SPECIFICATION.

Improvements in Feeding Devices for Mixing and Grinding Mills.

We, PETER RUNKEL, Merchant, and FRITZ SCHULTE, Foreman, both of Neuwied on Rhine, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in mixing and grinding mills of the class wherein the chamber receiving the material or materials is divided into two reservoirs for the reception of one or more materials which it is desired to mix and grind.

In apparatus heretofore constructed it has been customary to provide the said chamber with a partition extending within a short distance of the bottom of such chamber, having an externally operated flap or shutter pivotted to and forming an extension of such partition. This flap when revolved about its pivot closes or partially closes the reservoir desired, so that the supply of material from either reservoir to the receiver is regulated as required. Such apparatus has not proved quite satisfactory by reason of the material forcing its way between the end of the flap or shutter and the inner wall of the chamber, thereby rendering proper adjustment of the flap difficult, and consequently preventing the correct regulation of the supply of the material or materials which are being treated.

The present invention has for its object to obviate these difficulties by so constructing the apparatus as to render jamming of the flap or shutter by the resistance of the material practically impossible at the same time facilitating the action of such flap.

The application of our invention is illustrated in the accompanying drawings, in which:

Figure 1 is a front view of the apparatus.

Figure 2 is a side elevation.

Figure 3 is a cross section on line B—B of Fig. 1.

Fig. 4 is a part plan of Fig. 2 with the lid of the chamber removed.

In the apparatus constructed according to the present invention the flap or shutter *e*, which is pivotted at *d* to the lower end of the dividing partition *b* of the receiving chamber *a*, is at its outer periphery provided with a series of serrations *e'* which when the flap *e* is operated or adjusted, come into contact with the material causing any lumps or small pieces of the material which are near the edge of the flap to be broken up so as to allow them to pass through the spaces formed by the serrations, which will render the flap or shutter more easily operable owing to the material offering less resistance to the movement of the flap at its outer edge.

In another form of the flap *e* the outer edge or edges may be sharpened to form a cutting edge, or if desirable the serrations above referred to may each constitute a cutting edge and be formed like the blade of a saw.

In order to fix the flap or shutter *e* in any desired position in the chamber *a* I provide the shaft or pivot *d* on which the flap is mounted, the ends of said pivot passing through the opposite sides of the chamber *a*, with a spring or springs *h* pressing against the outer side or sides of the chamber *a* and a bush, handle or the like *f* formed on the end of the pivot *d*.

It will thus be seen that the supply of material to the receiver *c* from either chamber or reservoir may be regulated or the supply of either chamber may be entirely cut off.

A suitable scale or graduated plate *g* for indicating the position of the flap or shutter may be employed if necessary as will be well understood.

Improvements in Feeding Devices for Mixing and Grinding Mills.

s designates the chamber into which the ground material or materials is or are discharged.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that
5 what we claim is:—

In mixing and grinding mills in which the chamber receiving the material or materials to be ground, is divided into compartments and is provided with an adjustable regulating flap, providing the flap with a serrated edge or other suitable cutting device as and for the purpose described.

10 Dated this 13th day of April, 1912.

S. SOKAL,
14/15, Southampton Buildings, Chancery Lane,
1, Great James Street, Bedford Row, London, W.C.,
Chartered Patent Agent.

War With Spain.

INVALID.

Cert. No. _____

Name, _____

Rank, _____; Service, _____

Agency. { Original Roll : _____
 Transf'd _____, 1 _____, to _____
 " _____, 1 _____, to _____

Issued _____, 1

Mailed _____, 1

Rate and Period, \$ _____, from _____, 1

Deductions : _____

Disability : _____

Issued _____, 1

Mailed _____, 1

Rate and Period, \$ _____, from _____, 1

Deductions : _____

Issued, _____, 1

Mailed _____, 1

Rate and Period, \$ _____, from _____, 1

Deductions : _____

Disability : _____

Issued _____, 1

Mailed _____, 1

Rate and Period, \$ _____, from _____, 1

Deductions : _____

Disability : _____

INDORSEMENTS.